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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/563,633	01/06/2006	Masao Ieno	2005-2019A	3272

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Washington, DC 20005-1503

EXAMINER

GOTTFREDSON, GAREN

ART UNIT	PAPER NUMBER
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1619

NOTIFICATION DATE	DELIVERY MODE
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09/27/2011

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/563,633	IENO ET AL.	
	Examiner	Art Unit	
	GAREN GOTFREDSON	1619	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 August 2011.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on ____; the restriction requirement and election have been incorporated into this action.
- 4) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 5) ☒ Claim(s) 1,2,7,8 and 15-23 is/are pending in the application.
- 5a) Of the above claim(s) 15-22 is/are withdrawn from consideration.
- 6) ☐ Claim(s) ____ is/are allowed.
- 7) ☒ Claim(s) 1,2,7,8 and 23 is/are rejected.
- 8) ☐ Claim(s) ____ is/are objected to.
- 9) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 10) ☐ The specification is objected to by the Examiner.
- 11) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 12) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-302) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Status of the Claims

Applicants' amendment submitted 8/18/2011 has been entered. Claims 1-2, 7-8, and 15-23 are pending in the application. Of these, claims 15-22 remain withdrawn from consideration. Claims 1-2 and 6-8 are under consideration on the merits.

Status of the Rejections/Objections

The rejections of the claims over Nakashima in view of Nomura, or in view of Nomura and Hirose are withdrawn in light of Applicants' amendments.

A new ground of rejection is applied to the claims as detailed below.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-2, 7-8, and 23 are rejected under 35 U.S.C. 103(a) as unpatentable over Nakashima et al. (U.S. Pat. No. 7,273,501; of record) in view of the English translation of Hirose et al. (Japanese Patent Publication No. 2002-013071).

Regarding claims 1 and 8, Nakashima discloses a fibrous structure for use in clothing as a moisture absorptive/desorptive product (column 1, 1st paragraph). The clothing fiber preferably comprises a carboxyl-group containing acrylic fiber polymer (column 6, third full paragraph) that is crosslinked via a reaction with a hydrazine

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compound (column 7, 1st full paragraph). The hydrazine cross-linker may be any of those recited by claim 1 (column 7, 2nd full paragraph).

Regarding claim 7, the fibrous structure of Nakashima possesses a saturated index of moisture absorption of 10% by weight or more at 20° C and 65% relative humidity, which encompasses Applicants' claimed range of 20% or more (column 3, lines 20-24).

Nakashima does not further disclose that the polymer is ionically bonded to arginine or histidine via an acidic group as recited by claim 1, or the amount of ionically bonded amino acid (claim 23).

Hirose teaches that a fibrous skin care product comprising arginine will promote moisture retention on the skin (see Abstract). The product is obtained by immersing a fiber into an aqueous solution containing arginine (paragraph 14). Hirose discloses that the arginine may be imparted to a wide variety of natural or synthetic fibers, including an acrylic fiber (paragraph 5). Hirose explicitly suggests using the arginine-treated fibers in clothing (paragraph 6).

As to claims 1-2, 7-8, and 23, it would have been prima facie obvious to one of ordinary skill in the art at the time of the invention to modify the acrylic fiber clothing of Nakashima to include arginine as taught by Hirose, since Hirose teaches that doing so will impart beneficial moisturizing properties to the fiber, and Hirose explicitly discloses acrylic fibers as being suitable for treatment with arginine. The addition of arginine to the fibrous structure will necessarily form ionic bonds between the arginine and the acidic bonds of the acrylic fiber polymer as recited by claim 1.

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Regarding claim 2, Nakashima does not explicitly disclose the claimed eluting rate of the amino acid derivative. The acrylic polymers disclosed as useful in the invention of Nakashima, however, include methyl (meth)acrylate and ethyl (meth)acrylate (column 6, 3rd full paragraph). These same polymers are also disclosed as useful in the instantly claimed invention (page 18, lines 5-6 of the specification). One of ordinary skill in the art, therefore, would expect that the elution properties of the claimed sustained release polymer would be the same as the fibrous structure of Nakashima, since a product cannot be separated from its properties. The U.S. Patent Office is not equipped with analytical instruments to test prior art compositions for the infinite number of ways that an Applicant may present previously unmeasured characteristics. When the prior art appears to contain the same ingredients that are disclosed by Applicants' own specification as suitable for use in the invention, a prima facie case of obviousness has been established, and the burden is properly shifted to Applicants to demonstrate otherwise.

As to claim 23, it further would have been prima facie obvious to optimize the amount of ionically bonded amino acid to arrive at the instantly claimed amount, since said amount is a result effective variable that will affect the degree of moisturizing properties of the fiber.

Response to Applicants' Arguments

Applicants argue that Hirose only discloses applying arginine to the fiber via a binder, which is said to be an essential element of the Hirose invention, such that the arginine is not ionically bonded to the fiber as required by the instant claims.

In response, Hirose does not require the use of a binder. Rather, Hirose merely teaches that the use of a binder is preferred (paragraph 7). "Disclosed examples and preferred embodiments do not constitute a teaching away from a broader disclosure or nonpreferred embodiments." *MPEP 2123 II*. Moreover, due to the presence of carboxyl groups on the Nakashima fiber, it is expected that some portion of the arginine will become ionically bonded to the fiber even in the presence of a binder in the immersion solution.

Applicants' arguments relating to the Nomura reference have been fully considered but are moot in light of the new ground of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to GAREN GOTFREDSON whose telephone number is (571)270-3468. The examiner can normally be reached on Monday through Friday from 8:30AM to 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David J. Blanchard can be reached on (571) 272-0827. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/GJG/

/Patricia A Duffy/

Primary Examiner, Art Unit 1645